



WHAT LIES BENEATH...

By Paul Somerville, CZM

SOMETIMES THERE
ARE SIGNS TO LET
YOU KNOW OF
POTENTIAL CONTA-
MINANTS IN THE
WATER.

If there's one thing most people agree on, it's that the coastal areas of the Commonwealth have more than their share of very special, incredibly beautiful vistas. Think about the Great Marsh on the North Shore, Duxbury Bay on the South Shore, boat-filled Mattapoisett Harbor, and the marshes of the Westport River on the way to Horseneck Beach, both on the Buzzard's Bay shoreline. Then there's the Cape and Islands, affectionately called "God's Country" by Truman Henson, Cape and Islands Regional Coordinator for the Massachusetts Office of Coastal Zone Management (CZM). Places like Hatch's Harbor in Provincetown, Nauset Marsh from Fort Hill in Eastham, Barnstable's Sandy Neck, Nantucket's Madaket Harbor and the Vineyard's Menemsha Harbor or Gay Head. They are all beautiful for one reason or another.

But for some folks, many of these picture-post-card-perfect views contain numerous flaws—and some of us are paid to find them. I'm talking about local, state, and federal employees whose job it is to look for potential sources of pollution that alter natural ecosystems, causing coastal ponds and embayments to age at unnaturally accelerated rates, or that cause beaches to be closed to swimming and productive shellfish areas to be closed to shellfish harvesting. Let's not forget the many employees and volunteers from non-profit groups, as well as independent, unpaid volunteers that work out of their concerns for the environment. These folks all learn to look past the striking beauty and see the whole area from an environmental perspective, knowing that sometimes the very thing that makes a place so pretty might also be a potential problem. And sometimes nature hides the problem or disguises it,

only to reveal it later on.

The photos included here were taken at various places along the coast of Massachusetts. I am going to show you what lies beneath the pretty picture as filtered through my alert-to-potential-environmental-issues eyes. This is an exercise in contamination-source assessment and investigation and is not meant to indicate that any person, thing, or property in these pictures has been, is, or may be an actual source of fecal coliform bacteria contamination.

Oh, and when you look at such scenes in the future, you may develop a heightened awareness of what could be lurking in the background, but don't ever look so hard for the faults that you lose your appreciation for the beauty that's there. Trust me. Even the most hardcore pollution seeker can be stopped dead in their tracks by a colorful sunset.

A CLOSER LOOK...behind the pretty pictures

Comments by Paul Somerville, CZM

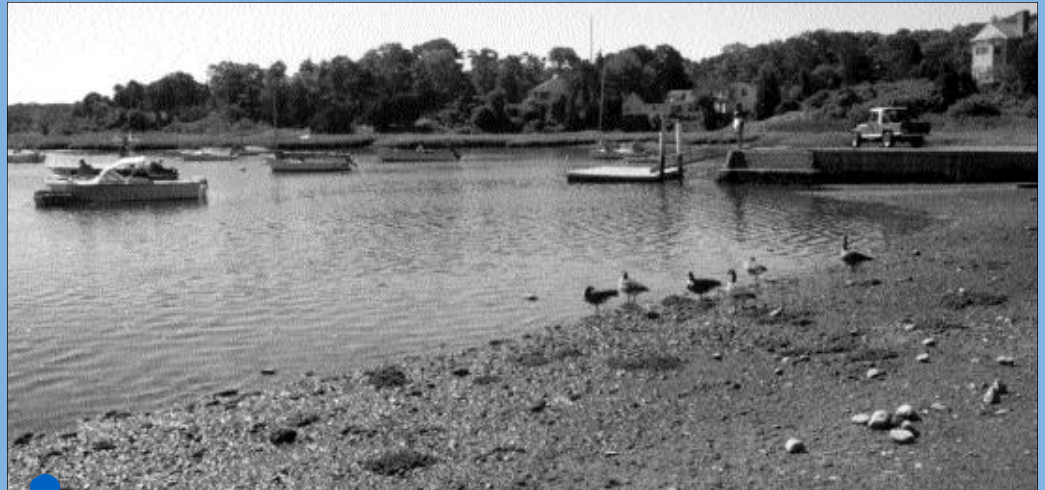
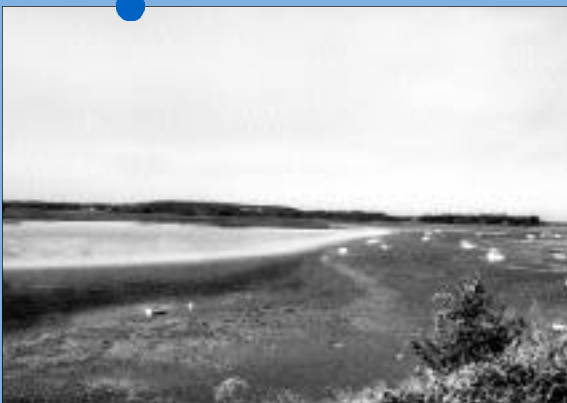


"The main thing I notice here is the houseboats. Are they weekend cottages? How are their holding tanks emptied? Does the owner take them to a pumpout facility? Also, I see the barrier beach and wonder if there are houses near the beach, just out of sight, and, if so, how old are their septic systems? Are they cesspools or Title 5 systems?"



"A storm drain coming out of a seawall; what particularly catches my eye is the amount of erosion at the base of the seawall, indicating that there's A LOT of water shooting out of that pipe. This leads me to wonder how much impervious surface there is. I also happen to know that a lot of the soils are heavy clay, which doesn't lend itself to natural filtration."

"What you DON'T see in this photo that would be revealed in water quality investigations is the sewage treatment plant just around the corner. Also, upriver, just out of site, is the center of a small town with lots of storm drains and impervious surfaces. A lot of the area is built on rock, which means that pollutants don't have the benefit of sand or soil filtration before they hit the water."



"We have houses fairly close to the bank, which means that faulty septic systems could be a real problem. And the geese! A definite bacteria source. Birds like to eat and then make room for more. And with boats I have to wonder, do they have enclosed heads? Also, all of the green algae in the intertidal area indicates loads of nitrogen-rich groundwater."